

Serial No. 09/179,188

KAS-125

released
the nucleic acids

Substrate for binding
to a solid phase

5 a step for adding ~~a binding~~ ^{an} accelerator to an aqueous solution containing the released nucleic acids ~~after the~~

7 ~~destroying step;~~

a step for ~~containing~~ ^{containing} the solution containing the

9 released nucleic acids and the accelerator ^{substantially} with an adsorbing

solid phase ~~thereby~~ to bind the nucleic acids to the adsorbing

solid phase, ~~after the adding step;~~

11 a step for isolating the adsorbing solid phase to which the nucleic acids are adsorbed from the solution, ~~after the~~

13 ~~contacting step;~~

15 a step for washing the isolated adsorbing solid phase

with an aqueous washing solution containing alcohol, ~~after the~~

17 ~~isolating step;~~ and

18 a step for eluting the nucleic acids bound to the

19 adsorbing solid phase from the solid phase, ~~after the washing~~
~~step;~~

2 wherein the destroying step through the eluting step are separately conducted from each other.

21. (New) The method according to claim 20, wherein the alcohol is ethanol.

22. (New) The method according to claim 20, wherein the aqueous washing solution further contains a salt.

23. (New) The method according to claim 22, wherein the salt is a member selected from the group consisting of acetate, sodium chloride and potassium chloride.

24. (New) The method according to claim 23, wherein the acetate is sodium acetate or potassium acetate.

CR-4
Sub D2
25. (New) A method for recovering nucleic acids from a nucleic acid-bearing material, which comprises:

a step for destroying a nucleic acid-bearing material to release the nucleic acids therefrom in an aqueous solution;

a step for adding a binding accelerator to an aqueous solution containing the released nucleic acids, after the destroying step;

a step for containing the solution containing the released nucleic acids and the accelerator with an adsorbing solid phase thereby to bind the nucleic acids to the adsorbing solid phase, after the adding step;

a step for isolating the adsorbing solid phase to which the nucleic acids are adsorbed from the solution, after the containing step;

a step for washing the isolated adsorbing solid phase with an aqueous washing solution containing alcohol and acetate; and

a step for eluting the nucleic acids bound to the adsorbing solid phase, thereby to obtain purified nucleic acids,

wherein the destroying step through the eluting step are separately conducted from each other.

26. (New) A method for recovering nucleic acids from a nucleic acid-bearing material, which comprises:

providing a first solution for destroying a nucleic acid-bearing material to release the nucleic acids therefrom;

providing a second solution by adding a binding accelerator to an aqueous solution containing the released nucleic acids;

providing a third solution containing the accelerator for binding the released nucleic acids to an adsorbing solid phase;

separating the adsorbing material to which the nucleic acids are adsorbed from the solution;

providing an aqueous solution containing alcohol and a salt for washing the isolated adsorbing phase;

eluting the nucleic acids bound to the adsorbing solid phase; and,

removing alcohol and salt contained in the eluted nucleic acids, thereby to obtain purified nucleic acids.

27. (New) A method for isolating an adsorbing solid phase to which nucleic acids are bonded, which comprises:
providing a first solution for destroying a nucleic acid-bearing material to release the nucleic acids therefrom;

providing a second solution by adding a binding accelerator to an aqueous solution containing the released nucleic acids, after the destroying step; and

providing a third solution containing the accelerator for binding the released nucleic acids to an adsorbing solid phase, after the step of providing a second solution,

wherein the first solution, the second solution and the third solution are prepared separately.

28. (New) The method according to claim 27, which further comprises separating the adsorbing solid phase from the third solution, after the binding step.

29. (New) The method according to claim 28, which further comprises providing a fourth aqueous solution containing a salt and an alcohol for washing the separated adsorbing solid phase, after the separating step.

30. (New) The method according to claim 29, which further comprises providing a fifth aqueous solution containing a buffer for eluting the nucleic acids from the solid phase.

31. (New) The method according to claim 30, which further comprises removing alcohol and salt remaining in the eluted nucleic acids.

32. (New) A method for isolating an adsorbing solid phase to which nucleic acids are bonded, which comprises:
providing a first solution for destroying a nucleic acid-bearing material to release the nucleic acids therefrom;